AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the Application. Deletions are ~~strikethrough~~ and additions are underlined.

Listing of Claims:

1. (Previously presented) A combustion engine comprising, a pair of opposed cylinder elements having a common axis, each cylinder element being provided with a piston reciprocable between first and second locations in the cylinder element the first and second locations respectively representing compression and expansion elements of the piston stroke, each piston having a forward side and a rear side, a combustion chamber for each cylinder element comprising the forward side of the piston and the walls of the cylinder element, combustible gas compression means for each combustion chamber, supply passage means arranged to deliver combustible gas to each combustion gas compression means, an induction chamber for each piston arranged to receive compressed combustible gas from the combustible gas compression means, transfer passage means for directing compressed gas from each induction chamber to the respective combustion chamber, cam means rotatable about the common axis the cam means being located between the pistons and being connected to each of the pistons for converting the reciprocating motion of the pistons into rotary motion of the cam means, the cam means comprising a cam track encircling a drive shaft aligned with the common axis, and cam follower means connected to the pistons the cam follower means being arranged to follow the cam track whereby to convert the reciprocating motion of the pistons into rotary motion of the drive shaft, wherein the arrangement is such that expansion stroke movement of each piston results in a corresponding compression stroke for the compression means and the pistons are coupled so that an expansion stroke of one of the pistons drives the compression stroke of the other of the pistons.

2. (Canceled)

3. (Previously presented) The combustion engine according to claim 1 wherein the cam track comprises a groove formed in the drive shaft.

4. (Previously presented) The combustion engine according to claim 1 comprising a bore assembly extending through each piston and in line with the axis of each piston and the transfer passage means extend within the bore, the transfer passage means including a transfer port for each piston arranged to communicate with the combustion chamber comprising the forward side of each piston, when each piston is at or near the second location.

5. (Previously presented) The combustion engine according to claim 4 including valve means operable by rotation of the cam means to close the transfer port during exhaustion of combusted gases from the combustion chamber and to open the transfer port after exhaustion of combusted gases from the combustion chamber.

6. (Previously presented) The combustion engine according to claim 1 comprising an exhaust passage communicating with the combustion chamber when the piston is at or near the second location, the piston being arranged to close off the exhaust passage when it moves to the first location.

7. (Previously presented) The combustion engine according to claim 1 comprising, an intermediate assembly extending between the pistons and connecting the rear side of each piston the intermediate assembly being slidable reciprocably along a center housing surrounding the cam means, and the combustible gas compression means comprise, a first induction/compression chamber for each piston between an end of the intermediate assembly and a piston sealing member, and a second induction/compression chamber for each piston between the forward side of the piston and the piston sealing member.

8. (Previously presented) The combustion engine according to claim 7 comprising, intermediate ducting means for allowing communication between the first induction/compression chamber of one piston and the induction/compression chamber of the other piston.

9. (Previously presented) The combustion engine according to claim 1 wherein the supply passage means comprise, a supply duct communicating with each induction/compression chamber, and valve means for allowing combustible gas to be sucked through the supply duct into the respective induction/compression chamber during an expansion stroke of the piston arranged to receive combustible gas from that induction/compression chamber.

10. (Previously presented) The combustion engine according to claim 4 wherein the drive shaft extends into both bore assemblies and through a head for at least one of the combustion chambers.

11. (Previously presented) The combustion engine according to claim 10 comprising a head for each combustion compression chamber, the drive shaft extending through each head.

12. (Previously presented) The combustion engine according to claim 7 wherein the combined volume of each pair of the first and second induction compression chambers is greater than the volume of each of the combustion chambers.

13. (Previously presented) The combustion chamber according to claim 12 wherein the combined volume is at least 1.2 times the volume of each of the combustion chambers.

14. (Previously presented) A combustion engine comprising, a pair of opposed cylinder elements having a common axis, each cylinder element being provided with a piston reciprocable between first and second locations in the cylinder element the first and second locations respectively representing compression and expansion elements of the piston stroke, each piston having a forward side and a rear side, a combustion chamber for each cylinder element comprising the forward side of the piston and the walls of the cylinder element, combustible gas compression means for each combustion chamber, supply passage means arranged to deliver combustible gas to each combustion gas compression means, an induction chamber for each piston arranged to receive compressed combustible gas from the combustible gas compression means, a bore assembly extending through each piston and in line with the axis of each piston

transfer passage means for directing compressed gas from each induction chamber to the respective combustion chamber, the transfer passage means extending within the bore, the transfer passage means including a transfer port for each piston arranged to communicate with the combustion chamber comprising the forward side of each piston, when each piston is at or near the second location, and cam means rotatable about the common axis the cam means being located between the pistons and being connected to each of the pistons for converting the reciprocating motion of the pistons into rotary motion of the cam means, wherein the arrangement is such that expansion stroke movement of each piston results in a corresponding compression stroke for the compression means and the pistons are coupled so that an expansion stroke of one of the pistons drives the compression stroke of the other of the pistons.

15. (Previously presented) The combustion engine according to claim 14 including valve means operable by rotation of the cam means to close the transfer port during exhaustion of combusted gases from the combustion chamber and to open the transfer port after exhaustion of combusted gases from the combustion chamber.

16. (Previously presented) The combustion engine according to claim 14 comprising an exhaust passage communicating with the combustion chamber when the piston is at or near the second location, the piston being arranged to close off the exhaust passage when it moves to the first location.

17. (Currently amended) The combustion engine according to claim 14 comprising, an intermediate assembly extending between the pistons and connecting the rear side of each piston the intermediate assembly being slidable reciprocably along a center housing surrounding the cam means, and the combustible gas compression means comprise, a first induction/compression chamber for each piston between an end of the intermediate assembly and a piston sealing member, and a second induction/compression chamber for each piston between the forward side of the piston and the piston sealing member.

18. (Previously presented) The combustion engine according to claim 17 comprising, intermediate ducting means for allowing communication between the first induction/compression chamber of one piston and the induction/compression chamber of the other piston.

19. (Previously presented) The combustion engine according to claim 14 wherein the supply passage means comprise, a supply duct communicating with each induction/compression chamber, and valve means for allowing combustible gas to be sucked through the supply duct into the respective induction/compression chamber during an expansion stroke of the piston arranged to receive combustible gas from that induction/compression chamber.

20. (Previously presented) The combustion engine according to claim 14 comprising a head for each combustion compression chamber, the drive shaft extending through each head and into both bore assemblies.

21. (Previously presented) A combustion engine comprising, a pair of opposed cylinder elements having a common axis, each cylinder element being provided with a piston reciprocable between first and second locations in the cylinder element the first and second locations respectively representing compression and expansion elements of the piston stroke, each piston having a forward side and a rear side, a combustion chamber for each cylinder element comprising the forward side of the piston and the walls of the cylinder element, combustible gas compression means for each combustion chamber, the combustible gas compression means comprising a first induction/compression chamber for each piston between an end of the intermediate assembly and a piston sealing member, and a second induction/compression chamber for each piston between forward side of the piston and the piston sealing member, supply passage means arranged to deliver combustible gas to each combustion gas compression means, an induction chamber for each piston arranged to receive compressed combustible gas from the combustible gas compression means, transfer passage means for directing compressed gas from each induction 15 chamber to the respective combustion chamber, cam means rotatable about the common axis the cam means being located between the pistons and being connected to each of the pistons for converting the reciprocating motion of the pistons into rotary motion of

the cam means, and an intermediate assembly extending between the pistons and connecting the rear side of each piston, the intermediate assembly being slidable reciprocably along a center housing surrounding the cam means, wherein the arrangement is such that expansion stroke movement of each piston results in a corresponding compression stroke for the compression means and the pistons are coupled so that an expansion stroke of one of the pistons drives the compression stroke of the other of the pistons.

22. (Previously presented) The combustion engine according to claim 21 comprising, intermediate ducting means for allowing communication between the first induction/compression chamber of one piston and the induction/compression chamber of the other piston.

23. (Previously presented) The combustion engine according to claim 21 wherein the supply passage means comprise, a supply duct communicating with each induction/compression chamber, and valve means for allowing a combustible gas to be sucked through the supply duct into the respective induction/compression chamber during an expansion stroke of the piston arranged to receive combustible gas from that induction/compression chamber.